NEW ENGLAND FARMER.

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INTERNAL IMPROVEMENT.

RAILWAYS.

(By the Editor.)

There are few subjects of more importance to a civilized community than those which relate to roads, avenues, carriages, and other ways and means of transporting commodities, and facilitating domestic and foreign intercourse. No village, town, or city in New England, can long remain wealthy and populous unless it is easy of access by land as well as by water; and, other things being equal, that portion of the interior, which is favored with the most safe, cheap and expeditious means of conveying its produce to a flourishing seaport will be most wealthy and prosperous.

Of all the means of conveyance which ingenuity has invented, or industry put in practice, we believe Railways are best adapted to the climate and face of the country in New England. We shall, therefore, offer some sentiments relative to this kind of highway, premising, that we have not the means, leisure, nor information necessary to write a complete treatise on this topic. Our desultory hints, however, may be the means of turning the attention of some others to this branch of national economy, who are more capable of giving it that high consideration, and thorough investigation, which its merits require.

By the term RAILWAY is understood a road formed by laying distinct tracks of timber, iron, or stone, for wheel carriages to run upon. In the construction of railways, stone is more particularly applicable to common roads, and the use of timber is now almost wholly laid aside; while iron is very generally employed, in Europe, though, we believe, stone will be deemed preferable in the United States.

"When we consider," says the Edinburgh Encyclopedia, the great proportion of labor, which is unavoidably spent in the carriage of the necessaries and conveniences of civilized life, in all its varied forms, we at once see the importance of every measure tending to facilitate and improve commercial intercourse. All are aware of the benefit, which Great Britain has derived from her inland navigation. Such, however, are the difficulties and expense of canal operations, that another substitute for the common road has long been sought after by the public. The attention of the engineer has accordingly of late been much directed to the construction of railways; a mode of communication which will be found more simple and economical in all its details than the canal.

"The speed of canal carriage must always be limited, by the destruction which rapid motion occasions to the banks. In this respect railways have great advantages over canals; for where the rails are strong, and the wagons light, the rapidity of conveyance may be conceived to keep pace with the impelling power of steam. The value of the economy of *time* is measured and proved by the vast exertions used and sums expended in Britain to accommodate the public, and the ample harvest reaped by those, who best fulfil its wishes in this respect. In this commercial country the economy of time, and that of *power* is felt to be the same thing; and the numerous carriages established in England to convey goods at *speed*, shows that the rapid conveyance is not confined to passengers alone. From the obstacles above mentioned, then, however managed or improved, we can never much increase the present rate of motion on canals, which must ever form a slow mode of conveyance, independently of its other advantages.

"The facility with which temporary railways may be laid for short distances from manufactories, granaries and other works, to communicate with great public lines of railway in their neighborhood, is another advantage belonging to the railway system; for the expense of a canal branch would in almost all cases, be much greater than any temporary or private object would repay; while branch railways would, when in general use, become readily saleable after the local object was obtained, and the principal expense incurred would in many situations, be merely that of laying and forming them into a road. When branch railways are connected with canals, much labor is lost in loading and unloading, besides damage occasioned by these operations to the articles conveyed.

"Railways again, will benefit by every improvement in the use of the steam engine, may be used in all situations where any mode of conveyance is possible, and in practice give about double the despatch of canal conveyance without increasing the working power. Indeed the anticipation of a speedy adoption and general use of steam conveyance on railways of iron and stone, would seem at present far more natural, and likely to be soon realized, than was imagined but a very few years ago, owing to the projected revolution now going on by the use of steam in the coasting trade.

"Under all circumstances, it is found that a horse works only with about three times the load upon a canal that he does on a well constructed level railway, which is now sought after as the highest improvement of which the interior communication of a country is susceptible. In proof of this we further notice that one person is sufficient to conduct the horse-load upon a railway, while three individuals are generally required for the same purpose upon a canal. We may also mention that inland navigation is subject to interruption by the frosts of winter and the drought of summer. The comparative facility of loading and discharging is likewise much in favor of the traffic on a railway; while nearly the same proportion of labor in the trackage of empty or return boats and wagons is incident to both. Without calculating on the immense loads, extending to fifty tons, [since this article was written to ninety-four tons] which have been tracked by the steam wagon, or of thirty tons and upwards, which have occasionally been moved by the horse upon a level railway, we can state that an active horse weighing ten cwt. conducted by only one man, upon a well constructed level edge railway, will work with ten tons of goods. In the same manner we may take thirty tons as employing the effective labor of one horse and three persons upon a canal; from which it will therefore appear, that the expense of trackage per ton is pretty much the same in both systems, while the first cost and consequently the toll or dues must be greatly in favor of the railway. For very weighty and bulky goods the canal is allowed to be more suitable; yet in practice many such articles may be so placed as to bear upon the wheels of more than one wagon on a railway. Upon the whole we are of opinion, that in every case it is better to construct a railway than a small canal, excepting where the union of similar works is to be effected. The case is different where it is intended to transport *sea-born ships* across a country, from shore to shore, as on the Forth and Clyde, the Crinan and the Caledonian canals in Scotland."

The Legislature of Massachusetts, at their June session in 1826, appointed a Committee, on motion of Dr Abner Phelps, a Representative for this City, "To take into consideration the practicability and expediency of constructing a Rail Road from Boston, on the most eligible route, to the western line of the County of Berkshire, in order that if leave can be obtained of the Government of the State of New York, it may be extended to the most desirable point on the Hudson river, at or near Albany." An able and interesting Report, prepared by Dr Phelps, Chairman of this Committee, was published by order of the Legislature. This Report states many facts and arguments which coroborate what is stated above, relative to the preference to which, in most cases, Railways are entitled, when put in competition with Canals. The following is extracted from that document:

"The numerous Railways, which have been for several years in successful operation in the hilly and mountainous districts of Wales, and in the north of England, prove their fitness for an uneven and undulating country. They are not like Canals, confined to a supply of water, and a series of levels, but they admit of a variation like other roads. True, a level road, where the transportation is equal both ways is the best. But unless the deviation generally exceeds $27\frac{1}{2}$ feet to a mile, it is practicably considered, a level way.—This deviation is nearly equal to three and an half locks on a mile of Canal." * * * *

"If the adoption of some measure to increase the means of intercourse between Boston and the Hudson be necessary; the question arises, shall it be by a CANAL or a RAILWAY?

"With respect to a CANAL, your Committee refer to the able Report of the late Board of Canal Commissioners communicated to the Legislature on the 11th of January last. By that Report, it appears that the only route for a Canal between Boston and the Hudson river would be 178 miles in length—would require one thousand nine hundred and fifty nine feet lockage between Boston and the Connecticut river—one thousand three hundred and $22\frac{34}{100}$ feet between that river and the Hudson, amounting to three thousand two hundred and eighty-one $\frac{34}{100}$ feet Lockage, and a TUNNEL of at least four miles in length, through Hoosack mountain. The work of forming a Tunnel is limited in its nature, to a certain number of

men, which can be employed at a time. And it is easy to show from the progress made in other works of the kind, that many years would necessarily be required to complete it.

"But even if a canal were constructed upon the proposed route, your Committee are unanimous in opinion that a Rail Road would be far more useful to the public. And their opinion in this respect is corroborated by Mr Tredgold, who states, 'that for new works Rail Roads will in nine cases out of ten be better adapted for public benefit than canals.' If this is true in England, where, from the mildness of the climate, a canal is seldom closed by frost; and upon an average not exceeding seventeen or eighteen days in a year, how much more preferable must a Rail Road be in all our Northern States, where a canal is closed upon an average, one hundred and forty-five days in a year."

The following summary view of the superior advantages which Railways possess, when compared with Canals, is extracted from an able paper, originally published in the Boston Patriot, by a writer with the signature "*Middlesex*."

The Railway requires but one third the quantity of land that is required for a Canal, exclusive of ponds, reservoirs, and feeders.

The Railway requires one man and four horses to transport fifty tons 4 miles per hour.

The Canal requires two men, one boy and two horses to transport 30 tons 2 miles per hour.

The Railway may be attended and kept in repair for one tenth that of a Canal.

Railways give the greatest possible facility to travellers, Canals retard them.

Railways may be easily passed in all places required, Canals only by bridges.

Railways interfere with no water privileges, Canals destroy many.

Railways are subject to no interruptions, except by snow, which is easily removed.

Canals are subject to be interrupted by droughts, flood, frosts, leakages and locks.

Railways carry their freight to the doors of the warehouses, Canals deliver their freight upon the wharf.

A Railway can be constructed for half the cost of a Canal per mile.

A Railway may be used twelve months in a year, a Canal but seven months.

The toll of passengers will pay the interest on the cost of a Railway.

The toll of passengers on a Canal is very trifling. Half the common rates of tolls on a Canal will be sufficient to pay the whole expense of transportation on a Railway, including the toll.

Mountainous countries are easily surmounted by Railways, Canals can never get over them.

Rivers and streams are much more easily passed by Railways than they can be by Canals.

Railways will be the pride of New England; they will unite its inhabitants in one common centre, connect them in one common interest, and raise them to eminence and glory by one common operation. *(To be continued.)*

FOR THE NEW ENGLAND FARMER.

INSECTS ON FRUIT TREES.

Mr Fessenden—You will receive with this a box containing 4 papers. Enclosed in No. 1 are pieces of bark from an apple tree, covered with blisters containing the nits or eggs of the lice described by Mr Perley.

No. 2 contains pieces covered with black eggs, from which the green lice are hatched, that are so destructive to the tender leaf of scions.

No. 3 contains a small piece of a limb of a pear tree, and pieces of bark from the same covered with the insect described by your correspondent "M." in the New England Farmer of the 21st ult. They were taken from a pear tree from Mr Prince's nursery, last spring. The tree was very thrifty, and arrived in good order. I examined it at the time of transplanting, and discovered no appearance of insects of any description till about the first of September, when I noticed the tree, from the ground to the end of the limbs, was covered with whitish scales. Immediately after the discovery the tree was well scrubbed with soap and water, and all that could be reached were removed, which will account for the scanty sample I send you. The insect and general appearance of the bark are very accurately described by "M." From the stained appearance of the bark in spots clear through to the wood, I think it will have a very bad effect upon the tree, if it does not entirely destroy it.

Probably Mr Prince, of Long Island, is well acquainted with the insect and its effects, and could favor the public with a correct account of it.

No. 4 contains pieces of bark taken from the body and limbs of smooth barked apple trees. I have observed them on my trees for several years, but have never read any account of them. They are sacks containing some kind of an insect, which, in the spring, will eat its way through one end of the sack and makes its escape. Whether it remains upon and draws its support from the sap or leaves of the tree, I am unable to say—perhaps you may know their history.

L. BARTLETT.

Warner, N. H. Dec. 15, 1828.

☞ We are under great obligations to Mr Bartlett for the favors above specified. The boxes and their contents may be seen at the office of the *N. E. Farmer*, and we hope Dr Harris will be so kind as to look at them with the eye of a connoisseur.—Editor.

From the American Farmer.

ON SHIFTING CATTLE.

J. S. Skinner, Esq.

Sir—I do not know that any writer in your paper has remarked on the astonishing effect produced by shifting cattle from lands of poor quality and short feed, to those of fertile soil and rich grasses. My experience is worth something on this point, and I wish to put it on record for the benefit of my countrymen.

In July, 1820, my farm being overstocked with sheep, I sold sixty of the poorest quality, the small, diseased ones, for *one dollar* per head, to a gentleman living about five miles from me. Our land was quite different in its quality. Mine was a thin, worn-out soil, producing nothing but rye; his was high and very rich land, covered with a thick growth of white clover. At the next season of shearing, I took pains to be at his pen. The whole sixty sheep purchased of me had lived through the winter; their produce per head was four pounds of clean washed wool, about three times as great as that of the preceding year; and their weight (but this last was conjecture,) was double to what it was when purchased of me.—He has at various times since purchased the refuse of my flock, and his example has been imitated by his neighbors in both cases with the same success. I have old worn-out ewes renovated by this shift from scanty to luxuriant pastures.

The same effects result from shifting the pasture of neat cattle and horses. In 1824 I purchased a pair of little oxen; one was eight years old, and the other his elder by six months. They were adjudged to possess a capacity for weighing when fatted—the one 700 lbs. the other 775 lbs. They were taken into my cow pastures, which, though a thin soil, were considerably better than that they had been reared on, their living having been hitherto very bad, and food meagre. I gave them my customary allowance to working oxen, and used them much in the yoke. They never had an ear of corn, nor root, from the time I purchased them till their death. I kept them two years. In the month of September, there being a scarcity of beef, I gave them some corn blades and pumpkins for six weeks, and they were sold to the butcher. One of them weighed 890 the other 976 lbs. They were not fat, one of them having but 60, the other 78 lbs. of tallow. If those who reside on the rich soils of Pennsylvania will buy, every two years, from the starved herds of New Jersey, they will realize more profit than by any other mode of raising stock.

Philadelphia, Nov. 26, 1828. T. J. R.

ON THE USE OF SAND

In propagating Trees, Shrubs, and Plants, from cuttings of them. By Mr Thomas Haines, *of Oundle, Northamptonshire.*

"The *finest white sand is superlatively useful to autumnal planted cuttings of the more tender evergreens and shrubs.* In the business of planting cuttings of these underhand-glasses, in the autumn, as well as the more hardy green-house plants, such as myrtles, faschia, roses, cistuses, germander, &c., no unmixed soil whatever can be found to bear a comparison with the *finest white sand*; as cuttings planted therein will be far more secure from mouldiness throughout the autumnal and winter seasons; during which times, the pots in which they are planted, generally remain standing up to their rims in the common ground, as the greatest preservative from frost; but in which situation they are more exposed to the ill effects of damp, than if standing on the surface.

"Although but little more than a knot, or a swelling protuberance, at the foot of each cutting, can be effected, during the first autumn; yet, on the advance of spring, they will early make roots, even without the addition of any other soil or article to promote their growth; and which young plants, being potted off, or transplanted in some way, as soon as they have formed sufficient roots; immense *quantities from these small cuttings, may be thus annually propagated*, by the help of the full sized single hand-glasses! This process, however, will not extend to any other description of plants than the evergreens.

"In the propagation of the trees and shrubs alluded to by this process, it must be recollected, that the sand is to be considered as no farther essential, than to strike or promote growth in the cuttings, sufficient for transplantation; as, on their being removed into another situation, in the next stage of the process, a mixture of suitable soil, with a proportion of sand only, will be requisite.

"We are not asserting that *yellow sand* will not equally apply in both cases, of planting cuttings of hardy evergreen trees and shrubs, both by summer planting, in the open exposure, and autumn planting, under hand-glasses; but in all the experiments we have witnessed, and throughout the whole of our own practice, *white sand*, where it could be obtained, has been invariably applied, and most successfully.

"When we reflect, that *mouldiness* is the chief annoyance to cuttings of almost every description when planted under hand-glasses; every propagator should strenuously guard against it: and we know of nothing *so likely to discharge wet, and prevent undue retention of moisture, as sand alone;* and this, in preference to every other soil and compost.

"There are few soils with which sand cannot be intermingled to the greatest advantage in the various other branches of horticulture, as well as in the propagation of plants and flowers; it being admirably adapted, from its loose and open nature, to expand the pores of heavier, more close, and adhesive soils, thereby opening the entire mass of compost, and rendering it porous, and open to the free admission and full expansion of the delicately fine, and thread-like roots of plants and flowers; and in which we have most satisfactorily witnessed its singular and superior efficacy! We have known in various cases, plants to have been placed in soils most opposite and ungenial to their natures and constitutions, and thereby early inclining to decay; but which were speedily restored to their original vigor and complexion, by a proper and timely application of white sand.

"The sand which has invariably been found to surpass all others for general and special purposes in horticulture, is *a peculiarly soft and fine white sand, of an unusual smoothness, nearly as fine as flour-emery.*

"Where none other than the common white sand, which is unusually coarse, can be obtained, small quantities of the most fine can be sifted out with a fine sieve. [Or still better procured from it by a little washing over.—*Ed. Tech. Rep.*]

"Little argument can be necessary to convince the unprejudiced florist, gardener, or amateur, of the general utility of suitable sands being mixed with the more cold and heavier soils; thereby rendering them open and porous to discharge all copious falls of rain, dissolving snow, &c., and which tend to overcharge adhesive soils with an undue proportion of moisture, and thereby to chill and starve the stock of plants and flowers."—*Tech. Rep.*

FOR THE NEW ENGLAND FARMER.

INSECTS ON FRUIT TREES.

Mr Fessenden—Among the many useful subjects, which have appeared in your paper, the one relating to "Insects on fruit trees" has been particularly interesting to me; having for a few years past, by way of pleasing amusement, turned my attention to the cultivation of a few choice kinds. But as we find few pleasures without some alloy, so I have, in common with my *fellow cultivators*, experienced some drawback from the satisfaction which would otherwise have been enjoyed, in consequence of the various and destructive, though sometimes minute enemies which attack most of our trees, and almost threaten to destroy our hopes.

We apply to our Legislature, and they make laws to prevent unruly boys and others entering our enclosures and pilfering our fruits; and this is all very well and necessary; but I undertake to say that we lose more in one season by those depredators which no laws will intimidate, nor arm of justice reach, than is lost in fifty years in the way just mentioned. Hence I think that all investigation which may lead to an extermination, or even mitigation of the evil, is exceedingly desirable, and I hope, as the subject is introduced in your useful publication now, while our common enemies have gone into "winter quarters" and given us time to rally and prepare for a new attack, it will be desirable that our efforts should be combined, and for this purpose that those who have made discoveries of the origin, or best mode of extermination of our cruel foes, should freely communicate the information for the benefit of the *common cause.*

In one communication in a late number of the Farmer, reference is made to a "rye shaped" insect which is found on the apple tree. This kind I have been troubled with for two or three years past, on a choice apple tree in my garden, and it seems they do not, like some other insects, make their appearance anew every year, but when once they have got *foot hold* they go on increasing from year to year, and probably would eventually destroy the tree entirely. I have tried the application of strong soap suds, &c. without effect in this case, and as the only effectual remedy have proceeded to scrape the bark until I had dislodged them. They might indeed be destroyed with less labor perhaps by the application of a strong solution of Potash, but as there is danger I think of injuring the buds and tender limbs to which the insects cling, I have preferred the method which I have adopted; perhaps, however, upon a larger scale, a less tedious course may be found as efficacious.

Another correspondent in your last number, mentions an appearance on one of his trees in September, which resembles "fish scales closely adhering to the bark, from the ground to the ends of the limbs." The same appearance I have noticed for the two last years upon a *Mountain Ash tree.* The first year I neglected to attend to this tree until the following spring, when the "scales" were pretty easily washed off with strong soap suds, and I noticed no appearance of them for the remainder of the season, until late in the fall, when I proceeded to scrape them from the bark, which may very easily be done with a small stick or other simple means. I have not yet satisfied myself whether this is an insect, as your correspondent thinks, or a disease of the tree making its appearance upon the surface. If the former, I think they must have been deposited on the tree early in the season, as there was no appearance of them on the wood of the previous year's growth. Another circumstance is, that, in both years they have appeared only upon one of two trees which are planted within about a rod of each other, and while the infected tree has for three or four years hardly increased in size, the other, with no better advantages has nearly or quite doubled, which leads me to suspect it may be a disease, for why should an insect attack one tree two years in succession, and leave the other untouched. At any rate there is evidently a connexion between this appearance whatever it may be, and the want of vigor in the tree, but whether it is the *cause* or the *effect* of that want of vigor, I am yet at a loss to determine. These trees, when planted a few years since, were of equal size and equally thrifty in appearance.

I have no doubt that the application of soap suds, &c. will be effectual in destroying most of the insects which infest the bark of our trees; but if their origin could be sought out, perhaps some easier and more expeditious method would be equally effectual.

I intended to have said something respecting other kinds of insects, as well as the alarming disease which has, particularly of late, appeared among our peach trees, but as this communication is already longer than I intended it should be, I will reserve my remarks for a future opportunity. Yours respectfully, D. F.

Charlestown, Jan. 13, 1829.

FOR THE NEW ENGLAND FARMER.

BUDDING FRUIT TREES.

Mr Fessenden—In the 2d vol. of the N. E. Farmer, page 353 is a communication from Mr C. Harrison, describing a mode of budding fruit trees, that he had practiced, somewhat different from any I have ever seen described. It is budding from cuttings taken from bearing trees in February, and preserved until wanted, in the same manner as if intended for grafting—the buds to be inserted as soon as the sap flows sufficiently free in the spring to perform the operation. Mr H. observes that he has only attempted budding apples and pears in this manner, but thinks it will succeed equally well with stoned fruit. If the above mode of budding fruit trees has ever been tried by any of your subscribers, on stoned fruit, I wish the result of the experiment might be made public, through the medium of your New England Farmer, for the benefit of at least one

LOVER OF GOOD FRUIT.

Lyme, Ct. Jan. 9, 1829.

From the Washington Telegraph.

Mr Editor—As this is a season when severe colds are very prevalent throughout the District, I have taken the liberty to send you for publication, the following recipe, which I found very effectual in my own case;

Cure for a Cold.—Take 1 teaspoonful of flax seed, with two penny worth of stick liquorice, and a quarter of a pound of sun raisins. Put them into two quarts of soft water; and let it simmer over a slow fire, till it is reduced to one; then add to it a quarter of a pound of brown sugar candy, pounded—a table spoonful of white wine vinegar or lemon juice.

Note—The vinegar is best to be added only to that quantity you are going immediately to take; for if it be put into the whole, it is liable in a little time to grow flat.

Directions.—Drink half a pint at going to bed, and take a little when the cough is troublesome.

This recipe generally cures the worst of colds in two or three days, and if taken in time may be said to be almost an infallible remedy. It is a sovereign balsamic cordial for the lungs, without the opening qualities, which endanger fresh colds on going out. It has been known to cure colds, that have almost been settled into consumption, in less than three weeks.

The preparation is a tea spoonful of vinegar to half a pint of the medicine.

From the Richmond Enquirer.

ON GYPSUM—AND ITS USES IN AGRICULTURE.

Gypsum, or Plaster, as it is commonly called, is a kind of earthy salt, composed of lime, sulphuric acid and water. When pure, these ingredients enter into its composition in the following proportions, in each 100 parts, viz.

Lime, . . .	32	to	34
Sulphuric acid, . .	46	to	48
Water, . . .	22	to	18
	100		100

Besides the various uses to which it is applied in the arts, it is an article highly recommended in agriculture as a great fertilizer of the soil and promoter of vegetation.

It is in this latter view that the writer of the following remarks wishes it to be considered, being well satisfied that it deserves the particular attention of the citizens of Virginia, and more especially of those in the middle and lower sections of the state, where their lands have been cultivated generally with less care, in regard to their preservation, and are considerably more deteriorated and exhausted than those in the valley and mountain country.

It is employed by agriculturists in a variety of ways, and always with the happiest effects, when pure and properly applied. It is sometimes sown over cultivated grasses, grain and other vegetables, as a top dressing. Grain and seeds, after having been moistened, are often rolled in it, previous to their being sown or planted. And, occasionally, it is dropped in the hills with corn, &c.

In the application of it, as a top dressing, attention should be paid to the times, season of the year, and growth of the plant; choosing a close, still, damp day, or still foggy morning, as the wind blows it about too much, and in dry weather it is not apt to stick well to the plants. Some are of opinion that the best time to dress young clover, sown down on grain, with it, is when it gets three leaves; others advise to defer it till the grain is cut off. For old clover, the best time appears to be as soon as vegetation commences in the spring. Tobacco should be dressed with it when the plants begin to spread the hill, and corn, when about half a leg or knee high.

When it was first introduced among us as an article of agriculture, the very high encomiums bestowed upon it, and the almost incredible accounts related of its wonderful effects on vegetation, induced many of our farmers and planters to engage in the use of it, fondly hoping, no doubt, that with the aid of clover and plaster, they would be enabled, in a few years, to resuscitate their worn out and exhausted soils, and impart to them a degree of fertility equal, if not superior, to what they originally possessed. But the result of our experiments has not been such as to sustain the exalted character it had acquired. For, although in some instances its effects were truly astonishing, its operation in general appears to have been very uncertain. And we have often had the mortification to witness, after having encountered much trouble and expense in procuring and applying it to our crop, that it was productive of no perceivable benefit. A consequence so discouraging seems to have brought it somewhat into disrepute. So that, far from being in general use at this time, as might have been expected, even those few who thought well of it at first, and were anxious to bring it into notice, have themselves become, in some measure, disgusted with it, and there are even some grounds to apprehend, unless something shall be done to restore it to confidence, that it will ultimately be abandoned altogether. A misfortune the more to be deplored, because nothing is more certain than that, when pure and judiciously applied, there is not a greater fertilizer known. And, indeed, without the aid of some such powerful substance, it is believed to be utterly impracticable, after the lapse of a long series of years, so to improve our lands as to give to them that degree of fertility of which they are susceptible.

To trace this uncertainty in its operation to its source, and to point out the means by which in future it may be avoided, would be to re-establish it in the public confidence. As our planters and farmers would, undoubtedly, freely employ it, could they be well assured that, in laying out their money in the purchase of it, they would no longer be subjected to the hazard of a disappointment. This will now be attempted.

It has already been stated that gypsum was composed of lime, sulphuric acid and water. And, by an attention to the relative proportions of each, it will be seen that, when pure, the sulphuric acid amounts to nearly half its weight.

The quantity usually sown on an acre, is a bushel, in which, as a bushel of ground plaster is said to weigh about eighty pounds, there would be

Of Lime, . .	25.60 lbs.
Sulphuric acid, . .	36.80
Water, . . .	17.60
	80.00

Now, it must be obvious that 25.60 lbs. of lime, which would amount to little more than a peck, could not possibly produce any visible effect when spread over an acre of land. The quantity of water (17.60 lbs.) would be next to nothing; and that, therefore, all the operative virtue of the article must reside in the sulphuric acid.

Hence it may rationally be inferred that, generally speaking, whenever the plaster fails to act, it is in consequence of a deficiency in due proportion of this latter ingredient: an idea that will receive much countenance from an examination of its properties, some of which will be found peculiarly adapted to the promotion of vegetation.—Such as its capacity for attracting moisture from the atmosphere—and, when combined with it, of generating heat. Thus affording, in itself, two of the four great essentials. For, whatever may be the opinions of some philosophers respecting the gaseous and ethereal elements of vegetation, in practice it is found that nothing more seems to be necessary, in addition to soil of a proper texture and judicious cultivation, than light, heat, air and moisture, distributed in due proportions.

It would certainly be highly proper that the legislature should extend the benefit of the inspection laws to the article of plaster, and establish inspections of it at suitable places, not only as affording relief and security to the purchaser, but as a measure of precaution, it being understood on good authority, that much of the refuse gypsum at the north, where they have inspections established, is ground up and sent to the south, by fraudulent dealers in the article, for sale.

But, in the mean time, to enable those purchasers who are not conversant with it, to judge at once of its purity, without the possibility of being deceived, it is deemed proper to state that nitrous acid, commonly called aqua fortis, forms an unerring test. They have only to drop a small quantity of it on the plaster, (whether ground or in the rock, makes no difference,) and if it causes an effervescence—a foaming and frothing similar to what is observed when strong vinegar is poured upon chalk, it is a proof of its impurity. And the degree of impurity may be pretty well ascertained by the mildness or vehemence of the effervescence.

Lime has a great affinity for all, *or most* of the acids, whether mineral or vegetable, and will effervesce with any of them. But its attraction for the sulphuric acid is much more considerable than for the nitrous acid, and, therefore, when fully saturated with the former, the latter can exert no influence on it. For it is a law of chemical action, that two substances having an affinity for each other, being brought into contact, under suitable circumstances, they will unite and combine together in such a manner that they cannot be again separated, but by the presence and intervention of some third substance, having a greater affinity for one of the combined bodies than they have for each other.

When, then, the nitrous acid is perceived to act upon the gypsum, it is a proof that the sulphuric acid not having been in a quantity sufficient completely to saturate the lime, it has only been partially converted into gypsum, and that a portion still remains unchanged, which is the part acted upon by the nitrous acid.

In whatever way the plaster may be applied to crops, it must first undergo decomposition. For so long as it remains undecomposed, the sulphuric acid, the operative material, will be neutralized by the lime, and will not be in a condition to act on the atmosphere, and the plaster will have no more effect than so much sand, or a like quantity of any other pulverized rock.

By what the decomposition is caused, it is difficult to determine; but that it is something, probably carbonic acid, derived from the air, is rendered highly probable from the circumstance that it will remain inoperative if buried too deep under ground. That it is an acid, and acts altogether on the lime, is obvious, otherwise the sulphuric acid would not be set free in a perfectly disengaged state, but would only enter into a new combination, be neutralized as before, and remain perfectly inactive.

The best effect of plaster seems to be as a top dressing, used on dry land, and in cool dry weather; as in very wet seasons, and on low, flat, wet land, its influence is not very discoverable.

As to the modus operandi, or manner in which plaster acts, it appears to be very generally imagined that it possesses the power of stimulating the earth into preternatural action, and that, however beneficial it may be at first, it will ultimately, by long continued use, produce exhaustion, and cause more injury than ever it did good. An opinion, probably growing out of the fact that a long and unremitted use of it brings about that condition of the soil denominated "plaster-sick."

The subscribers to this doctrine seem to consider the earth somewhat in the light of a lazy, slug-

gish beast, that may be forced into a motion greatly beyond its natural gait, but if continually put forward in this way for too long a period, its spirits become broken, its strength exhausted, and it finally tires and becomes incapable of further exertion, until, by rest, it has been enabled to recover its wonted vigor.

This opinion, taken up hastily, no doubt, and without much reflection, but bearing the authority of some great name, and wearing the air of plausibility, seems to have been as incautiously adopted, merely because men in general had rather subscribe to any opinion, on difficult subjects, that had the plea of plausibility and ingenuity on its side, and was ready made up to their hand, than be at the trouble and pains of reflecting and forming one for themselves. But as light, heat, air, and moisture are alone essential to vegetation, there was the less necessity for resorting to the stimulant properties of gypsum and the excitability of the earth: it being believed to be a well established fact that the only, or at least the chief office of the earth, is simply to serve as a matrix or bed for plants to grow in, and as a kind of laboratory in which the various processes of vegetation are elaborated.

Much, to be sure, depends on the nature, texture and preparation of the soil, which should be such, either naturally or artificially, as readily to imbibe moisture and to permit only of its gradual escape, that as much nourishment as possible may be retained to feed the roots of the young plants and to admit of an easy extension of them.

When, therefore, the soil is not naturally such as we would have it, it should be our business to make it so. Sand is open, warm, and generous; freely receiving, and as freely parting with heat and moisture. Clay, on the contrary, is cold, difficultly penetrable, and very retentive. Thus, when our soil is too sandy, we should dress it with clay. When clay too much abounds, with sand. Attention to the texture of the soil is as necessary as manuring: for, unless that is of a suitable quality, it is scarcely possible, by any preparation we can give it, to afford to manure an opportunity of exerting its full power; the chief virtue of which, it is believed, resides in its liquescent salts, which readily attract moisture from the atmosphere, and generate heat by thus hastening the decomposition of its putrescent particles; in this way producing effects similar to those of plaster.

Lands rendered sterile by an excessive use of plaster, and which are then said to be "plaster-sick," are observed to be much in the condition of stiff clays that have been run together by hasty, beating rains, and become baked as we call it; so that when an attempt is made to cultivate them, they break up in clods, and will not produce.—This arises, not, as has been imagined, from the strength of the earth having been exhausted by too great stimulation, but from the solvent property of the sulphuric acid contained in the plaster, (for, besides its two before mentioned properties, it is also known to possess that of a solvent,) which, by dissolving a portion of the ferruginous and other mineral matters contained in the earth, and converting them into clay, ultimately renders that soil stiff and obdurate which before was open and free. So that the texture of the land in this case, as in that of stiff clays, is no longer such as is proper for vegetation. Being too much compacted and its particles too closely wedged into one another freely to receive, retain and gradually transmit heat, moisture, &c. But this is a discovery which leads at once to the remedy; for in both cases it becomes necessary that these lands should be dressed with sand, which should be ploughed and mixed with the earth so minutely as to divide and separate the particles of clay and keep it loose and open; when, no doubt, "plaster-sick" lands, as well as those that are sterile and unproductive, from being naturally too stiff and clayey, will be quickly restored and made to produce as well as ever.

The idea of dressing lands with sand or clay, according to circumstances, seems as yet to have been but little thought of in Virginia. Nothing, however, is mose certain than that, if judiciously applied, they will be found equally as valuable as any other dressing we could give them. These things are now as well understood in England as any other process in farming. There pits both of sand and clay are opened, and frequently they are carried the distance of many miles: it being a well known observation there, that the first step towards improving lands, if not naturally of a suitable texture, is to make them so artificially; because they know that this is necessary to give to manure its full effect.

Formerly, before this was well understood and attended to, and previous to the introduction of gypsum, they attempted the improvement of their lands with marl. It succeeded very well at first, but by an ineautious and excessive use of it, they finally rendered them barren and unproductive: and, in some instances, they are said not to have perfectly recovered in less than eighty years.—Marl is a fat, unctious kind of earth, and very tenacious; hence, when used in too great quantities, it has the effect of binding the soil, and causes it to become so close and cohesive as to render it unfit for useful production. Such lands might have been said to be marl-sick, and would have required the same remedy as those that are now said to be "plaster-sick," and I may add that are clay-sick.*

Burning stiff lands has nearly the same effect as sanding of them, by indurating the particles and bringing them somewhat into the condition of pounded bricks.

A FRIEND TO AGRICULTURE.

[*Note by the Editor of the American Farmer.*]—We have lately conversed with several farmers of experience, who have used plaster of Paris for many years. Their impressions appear to be, in brief: that land which was rapidly brought some years from a state of exhaustion to a state of fertility, by the use of plaster to promote the growth of clover, and to which land plaster had never before been applied, being since reduced by culture to its original degree of infertility, *that land* refuses to be acted upon again by plaster in any thing like the degree which it produced when formerly applied.]

A Farmer of German Flats.—Mr Chester Paine, of this town, raised this year, on less than 11½ rods of ground, 52 bushels of Onions, Turnips, and Potatoes; being 723½ bushels per acre.—The circumference of one Turnip was nineteen inches.

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* It is an old saying in England, that

"He who marls sand buys land—
He who marls clay throws all away."

From the American Farmer.

Important Observations on the Preservation of Indian Corn from the Fly or Wevil, in the Corn House.

Dear Sir—For many years past, I had determined if ever I should build another corn house, it should be double the size necessary for housing my corn in the old way; intending to store it as pulled with the husks on. In the summer of 1827, I built such a house with a door at each end, and in the month of October from the 7th to the 27th, housed my corn therein from the carts as it was hauled in with the husks thereon. When the mornings were damp, the part then pulled was deposited in the barn for immediate use. Within two or three weeks, I have husked out by an invalid hand, all that remained of the crop so put away, and find that it has kept to admiration, it comes from the husk glossy and fresh like new corn, and not a layer more imperfect and unsound than would have been, had it been husked out at the time of pulling, and then separated in the usual way.

I send you three ears of my last year's crop, number 1, 2, 3. The two ears numbered 1, 2, were stored in the corn house as above, and lately husked. On examination you will find No. 1 perfectly free from fly holes, not a grain thereof injured; this ear was covered entirely with its husk. No. 2 has the most of its grains towards the small end only, fly eaten, as you will observe; this ear was not covered entirely with its husk out to the end thereof, and the part fly eaten exposed. No. 3 is an ear that my manager, it being handsome and speckled, accidentally took from a heap as they were husking for immediate use in the fall of 1827, and carried into the house and put into his closet, where it remained until lately. As we both observe in husking out during the last two or three weeks, that a good deal of the corn was at the small end fly-eaten, and that it was never so in any of the ears except those not fully protected by the husk, it induced him to bring out and show me the ear No. 3, now sent, which had been in his closet during the year past. This ear as you see is literally eaten to a honey comb, almost every grain thereof, by the fly.

From the above circumstances I draw the conclusion, that if I had husked out my crop last fall in the usual way, and so housed it, the whole thereof would have been totally ruined by the fly. Such an event did occur to my crop of corn made in the year of 1826 which was husked out and housed as is generally practised. What remained thereof in the fall of 1827, was scarcely fit to use, from the quantity of the fly therein. I am therefore satisfied that the plan of housing corn with its coat on, at any rate one half the crop made, is infinitely superior to the old method; moreover it is less likely to be pilfered.

The fall of 1827, winter and spring of 1827, 1828, were from the general quantity of rain that fell, peculiarly unpropitious to my experiment; on examination through the winter of 1827, 1828, the entire mass of husks and corn, for we dug into it, was often found in a giving state, and sometimes heated in a small degree, which alarmed me for its safety, but on the occurrence of a north wester, the husks almost immediately became cold, crisp, and dry, as when put into the house.

Some of the husks themselves were lost, per-

haps one fourth part, being those got out in the summer time. However, the cows, even then, although well pastured, seemed fond of and did eat them heartily, which I ascribed to the nubbins and some ears not completely husked and left amongst it.

I saved all the husks lately made, and put them in a shed convenient to the cow yard and shall begin feeding with them.

With great respect, yours,

JAMES CARROLL.

Mount Clare, Oct. 2, 1828.

NEW ENGLAND FARMER.

BOSTON, FRIDAY, JAN. 16, 1829.

A NEW VARIETY OF POTATOES.

A paper entitled "*Remarks on the cultivation of a new variety of Potatoes,*" read before the Farmer's Society, of the town of Florida, N. Y. by Dr S. Reynolds, and published in the *New York Farmer*, contains the following observations:

"For a long time past, we have had fine potatoes, for autumn, winter, and spring use; but it is only within a few years that I have had good ones in the summer. Several experiments have been resorted to, in order to preserve the old roots until the new ones were ripe, but all without success. By or before the middle of June, the old potatoes, however carefully laid up, became shrivelled and watery, and almost or quite unfit for the table. At this time the new ones are just beginning to form, and are yet small and tasteless, and so continue for several weeks. To supply this destitute period, I have found a kind of potato, which planted in a warm situation and on good soil, will contribute an abundant supply for the table before the old ones become useless. They were brought from a very northern latitude to this place, where they had become habituated to the short summers of that climate, and will here ripen in forty or fifty days after they vegetate, and appear above ground.

These potatoes are white, smooth, with few eyes, and of a large shape, generally a little flattened; and as they came to me anonymous, I have given them the name of Florida whites. * * *

"I have planted them for four years, and have always found them a great acquisition; nor do I think they deteriorate in any respect, but have every year improved in size. For the last two years I have planted them upon a good soil, highly manured, with coarse stable dung. By the first of August the tops turned yellow and died away. I then caused the roots to be dug and the land to be finely ploughed, and levelled with a harrow. Turnip seed was then sown, and covered with a light harrow, and the ground pressed with a heavy roller. At this late season I experienced no injury from the fly. The turnips were thinned out, kept free from weeds, and I have both years had an abundant crop of solid fine turnips.

"The cultivation of the potato appeared to answer all the purposes of a summer fallow, so that I have reason to think my turnips were as good as if I had taken no previous crop."

LIVE FENCES.

A writer for the *New York Farmer* recommends "the juniper or red cedar," as well adapted for hedges, and says:—"The hardy nature of the plant—the ease with which it may be cultivated in almost any soil or climate, is evinced from its spontaneous growth in old neglected fields, from the berries which it produces in great abundance. Its property of growing more densely than any other tree which attains an equal size, and the lasting and valuable timber it produces, when full grown and at maturity, are distinguished qualities, which go to give it a preference, for cultivation as live fence, in my estimation, over any other tree or shrub.

"Some may object to the cedar, as growing too large, thereby producing a shade on the borders of the fields, much to the injury of the crops growing thereon. But the protection they would afford against the autumnal and wintry blasts, which frequently sweep over our fields, carrying with them the best particles of the soil, would amply compensate for the injury sustained from the shade; or by lopping and pruning they may be kept in such a state as to make but little shade as they produce no additional scions under this operation. The cedar, unlike the hawthorn, must vegetate very quickly from the short time in which it will overspread a field, where large trees of this species are growing on its borders, the land having been previously cleared and afterwards suffered to lie dormant for a few years. I have frequently seen them bordering the highways on the north side of Long Island, spontaneously growing so closely together as to form almost an impervious hedge row and fine fence. The most easy and expeditious way of propagating cedar for fence, where the young trees may be had from the old fields and woods free of expense is doubtless by transplanting. But I had hitherto considered the cedar, like other evergreens, difficult to transplant with success; until sometime past, conversing with a friend on the subject, he informed me that he had been in the habit of transplanting them for the purpose of fence, for several successive seasons, and that he had experienced no difficulty with ordinary ones, in making them live and flourish well. In cultivating the cedar from berries, having determined on the location, which, for convenience, should be by the side of an old fence—form a ridge by passing two or three times forth and back with the plough, and on this ridge plant the berries; and after being up, thin them out and prune them as their growth may require. By this means, in a few years, may be produced a beautiful hedge row."

FEEDING CATTLE.

An English writer observes, that two great points in feeding cattle are regularity and a particular care of the weaker individuals. On this last account there ought to be plenty of trough or rack room, that too many may not feed together; in which very common case the weaker are not only trampled down by the stronger, but they are worried, and become cowed and spiritless; than which there cannot be a more unfavorable state for thrift; besides, these are ever compelled to shift with the worst of the fodder. This domineering spirit is so remarkably prevalent among horned cattle, that the writer has a hundred times observed the master beasts running from crib to crib, and absolutely neglecting their own provender for the sake of driving the inferior from theirs. This is, much oftener than suspected, the chief reason of that difference in a lot of beasts, after a winter's keep. It is likewise, he says, a very common and very shameful sight, in a dairy of cows, to see several of them gored and wounded in a dozen places, merely from the inattention of the owner, and the neglect of clipping the horns of those that butt. The weaker animals should be kept apart; and in crib feeding in the yard, it is a good method to tie up the master beasts at their meals.

Dr Deane says, "There should be more yards than one to a barn, where divers sorts of cattle are kept. The sheep should have a yard by themselves at least; and the young stock another, that they may be wholly confined to such fodder as the farmer can afford them."

SHEEP.

It is recommended to give ewes with lamb a somewhat more than ordinary quantity of food for a month or six weeks before they are expected to yean. Not enough, however, to make them fat, as dangerous consequences might attend their being in very high condition at that period. Turnips are said, by some writers, to be injurious to sheep with lamb, but may be given them after they have yeaned. If your sheep, whether store sheep or ewes with lamb, have good hay, about a quart of potatoes a day to each, will, it is said, be very beneficial, and an ample allowance.

"Care should be taken to place in the stable or yard, in which sheep are kept, small tubs or troughs of water for the sheep to drink in. They will do very well in summer without water, as they feed when the dew is on; but they need water in winter, especially if fed mostly on dry food. When sheep have colds, and discharge mucus from the nose, good feeding, together with pine boughs, given occasionally, will cure them; or tar spread over a board, over which a little fine salt is strewed, to induce sheep to lick up the tar, will cure a cold."* Half a gill of Indian corn a day, given to each sheep, during winter, will, it is said, assist in keeping them in good heart, prevent the wool from falling off, and enable the ewes to rear their young better than they would if fed altogether on food of a less substantial nature.

"When several kinds of food can be procured, it is right to give them alternately to the sheep at different meals, in the course of the same day; the qualities of one kind aid or compensate those of another. At certain hours of the day any fodder should be given, and at others roots or grain. If there be any danger that the roots may decay, the winter should be begun with them, for alone they would not be sufficiently nutritious."†

MASSACHUSETTS SOCIETY FOR PROMOTING AGRICULTURE.

The Committee on Agricultural Experiments, in addition to their Report made on the 15th day of October last, ask leave to submit the following:

That the Society's premium, of twenty dollars, be allowed and paid to Mr Paul Adams, of Newbury, for the greatest quantity of winter rye raised on one acre, being thirtyeight bushels and five quarts. Mr Adams makes the following statement: "The soil on which the above crop grew, is a yellow loam upon a gravel bottom, in 1827 was planted with Indian corn, and manured with about 6 cords of compost manure, spread on and ploughed in. The said compost was made in the barnyard, from the droppings of the cattle, marsh sods, salt hay, &c. trodden and pulverized by the cattle. As I have been in the habit of growing rye, and manured with the like kind of dressings for a number of years, and have uniformly had good crops, some of them exceeding in quantity the last, it has suggested to me that the saline matter which was con-

* *Deane's* New England Farmer.

† Tessier's Treatise on Sheep.

tained in the manure did not help the same. The seed was hoed in the last hoeing of the corn, in August 1827—about five pecks to the acre—harvested in July 1828, and threshed two or three weeks after; and there were thirtyeight bushels and five quarts."

JOSIAH BASS, Esq. of Quincy, raised the past season, on one acre and fortytwo rods, thirtyfour bushels and three pecks of winter rye.

Two communications on the subject of destroying the bee moth were received by your committee: one of them from Mr D. CHANDLER, of South Hadley, in the county of Hampshire; and the other a long and learned dissertation from Doctor JAMES THATCHER, of Plymouth, author of the American Orchardist. Doctor THATCHER recommends several methods of destroying this insidious and powerful enemy, which has of late years infested the dwellings of one of the most useful and interesting animals with which bountiful Providence has supplied us. Your committee recommend that both these communications be inserted in the Massachusetts Agricultural Journal. They will afford valuable information to those farmers, and others, who usually keep bees; and may possibly elicit some further useful observations on this not unimportant subject. Mr CHANDLER does not hesitate to pronounce his method of preventing the ravages of the bee moth as a sovereign remedy—one that may with full confidence be relied upon. Doctor THATCHER, it will be seen, expresses some doubts as to Mr CHANDLER's method, and closes his dissertation with recommending that the hives be deposited in a building to be provided for the express purpose of covering them, leaving openings to admit of the egress and ingress of the bees, whilst employed in collecting their winter stores; which apertures may be closed at night during the moth season. Your committee not being themselves fully satisfied that the very best method of destroying the bee moth has as yet been discovered, and therefore are not prepared to say that the communication of either gentleman conveys a new and decided preventative against the ravages of that insect, and such as creates a sufficient claim for the premium. But both communications contain valuable hints, and appear to be the result of accurate experiment, and industrious investigation.

Which is respectfully submitted.

THOMAS L. WINTHROP,
BENJAMIN GUILD,
JOHN C. GRAY,
} *Committee.*

Boston, January 10, 1828.

ECONOMY IN FIREWOOD.

The size into which wood should be split, so as to be durable in burning, and yet give sufficient heat, is a matter worthy of some consideration. If split very small any given quantity will give more heat for a while, but will be quickly consumed; if large, it will consume slowly, but will burn less readily, and give much less heat. A fire composed of billets of wood not more than 14 inches long, will give more than two thirds as much heat as that made of wood double that length. Perhaps billets of from three to four inches diameter on a medium, will be found most economical.

GOOD BREAD.

An English publication asserts, that a mixture of two parts flour, and one of potato, makes an agreeable bread, which cannot be distinguished from wheaten bread. It is said that not less than 300 tons of potatoes are consumed for that purpose every week in London.

Measures are taking in Albany for the establishment of a Horticultural Society in that place.——A Horticultural and Botanical Association has been incorporated in Hartford, Con. with a capital of $25,000.

There were strawberries on the table at the dinner at New York, in honor of Gen. Jackson, 8th inst. They were from Mr Parmentier's hot-house, Brooklyn, Long Island.

We are obliged to defer till next week, the publication of an article on Ice Houses and Refrigerators.

Assorted Seeds for Families.

For sale at the New England Farmer Seed Store small boxes of assorted Seeds for Kitchen Gardens. Each box contains a package of the following Seeds:

Early Washington Peas	Parsnip
Dwarf Blue Imperial Peas	Large Cabbage Lettuce
Late Marrowfat Peas	Long Green Turkey Cucumber
Early Mohawk Dwarf string Beans	Pine-apple Melon
	Nasturtium
China Dwarf string and shell Beans	Large White Onion
	Large Red Onion
Lima, or Saba Pole Beans	Curled Parsley
Blood Beet	Flat Squash Pepper
Early Turnip-rooted Beet	Early Scarlet Short-top Radish
Early York Cabbage	White Turnip Radish
Large late Drumhead Cabbage	Salsify
Cape Savoy Cabbage	Early Bush Squash
Red Dutch Cabbage *(for pickling)*	Early White Dutch Turnip
	White Flat Turnip
Early Horn Carrot	Yellow Stone Turnip
Long Orange Carrot	Winter Crook-neck Squash.
White Solid Celery	
Curled Cress	POT HERB SEEDS.
Early Cucumber	Thyme—Sage—Marjorum.
Early Silesia Lettuce	

The above list, it will be seen, comprises all the common vegetables, besides several new varieties of recent introduction, and uncommon excellence. Every kind is warranted of the very first quality, as to freshness and purity. Each box contains directions for the management of the different sorts. Price $3 per box.

For Sale,

In the southeasterly part of old Marlborough, a valuable Farm, containing about 120 acres, consisting of every kind of land that is desirable to the enterprising farmer, a large portion of which is of the first quality, having a constant stream of water running through it; and the land is so situated that a number of acres are capable of irrigation. On the premises is an upright two story House, with four rooms on the floor, in good repair; a large Barn, 80 by 30, and in common seasons is filled with good hay. There are also on the farm, good Orchards, a part of which are in their prime; together with an abundance of Wood, the best of white oak, fit for wheelwrights' use, or for ship timber. There are few farms capable of more improvement, or which can be carried on at less expense. The place will be sold at a fair price, with or without the stock and utensils, at the election of the purchaser. The payments made easy and accommodating, and possession may be had on delivery of the deed. For further particulars, please inquire of WILLIAM DRAPER, Esq. of Marlborough, of BENJAMIN WELD of Roxbury, or of SAMUEL H. WELD, on the premises, Jan. 16.

Two Heifers For Sale.

Two Superior Heifers, with calf, mixed between the Derbon and Cœlebs breed. Both of which took a premium at the late Show in Brighton.—Inquire of Daniel Chandler, Lexington, or at the counting room of the New England Farmer, Agricultural Warehouse, Boston. 3t Jan. 2, 1829.

The Hunterdon Gazette Establishment for sale,

At Flemington, Hunterdon county, New Jersey, on reasonable terms. Address the Editor, (post paid) at Flemington, New Jersey. 3t Jan 2

To the Public.

The subscriber would inform the public, that certain persons did, some time since, obtain a certain Patent Right, claiming for their improvement, a Reaction principle, or action two ways, vainly supposing they were about to alter one of the fundamental laws of mechanism, by gaining in time without a loss of power, or gaining in power without a loss of time. This foolish idea they attempted to demonstrate by constructing a Press for Hay, &c. with two fixed horizontal boxes, one on each end of a horizontal frame. In these boxes the hay or cotton was to be put, or stowed vertically, and the reaction power applied to both boxes at the same time, horizontally; thus they expected to press two bales with one and the same power, in the same time that it took to press one; but they failed in their purpose, both on account of reaction, and mode of stowing and pressing, —for it was found impossible to confine fibrous materials with bands, that are stowed and pressed at right angles with the stowing.

It is well known in Maine that Mr Moses B. Bliss, of Pittston, Kennebec county, has recently made an important and useful improvement in the construction of a Press for Hay and other fibrous materials, and secured to himself the extensive property of said improvement, by taking out Letters Patent for the same under the Seal of the United States, which property he claims, principally, from having made his box to revolve on trunions, which project from near the centre of its largest sides, so that it may be turned to an upright position for the convenience of filling and stowing, and then to a horizontal one for pressing.—The other part of his specification has nothing very particular in it, except in moving the machine by means of gear-work and a small cog-wheel affixed to the axle of a large pair of locomotion wheels. This Press Mr Bliss has had in successful use for many months, and it has been fully tested by those well qualified to judge of its merits, and met their decided approbation.—He has effected in this machine what has long been a desideratum, viz. to have a moveable press; and to have it moveable, it is necessary that it should be horizontal, and to have it horizontal, there must be a revolving box.

Why I would draw the attention of the public to the specification above, is, because the said persons have abandoned their press on the reaction plan, and imitated Mr Bliss in every particular except the revolving box, and are now attempting to palm off this imitation press under their credentials for a reaction power.

The public are advised to compare the specifications with the model now exhibiting. CALVIN WING.

Gardiner, Dec. 31, 1828. Jan 16 3t

PRICES OF COUNTRY PRODUCE.

		FROM	TO
APPLES, best,	barrel.	3 00	3 75
ASHES, pot, first sort,	ton.	130 00	135 00
Pearl, first sort,	"	130 00	135 00
BEANS, white,	bushel.	80	1 12
BEEF, mess,	barrel.	10 00	10 50
Cargo, No. 1,	"	8 50	9 00
Cargo, No. 2,	"	7 50	7 75
BUTTER, inspected, No. 1, new,	pound.	14	16
CHEESE, new milk,	"	7	9
Skimmed milk,	"	2	3
FLOUR, Baltimore, Howard-street,	barrel.	9 00	9 12
Genesee,	"	9 00	9 25
Rye, best,	"		
GRAIN, Corn,	bushel.	63	65
Rye,	"	75	80
Barley,	"		70
Oats,	"	30	33
HOG'S LARD, first sort, new,	pound.		9
LIME,	cask.	85	90
PLAISTER PARIS retails at	ton.		3 00
PORK, clear,	barrel.	16 00	16 50
Navy, mess,	"	13 00	13 25
Cargo, No. 1,	"	13 00	13 25
SEEDS, Herd's Grass,	bushel.	2 00	2 50
Orchard Grass,	"		3 00
Fowl Meadow,	"		4 00
Rye Grass,	"		4 00
Tall Meadow Oats Grass,	"		4 00
Red Top	"		1 00
Lucerne,	pound.		50
White Honeysuckle Clover,	"		50
Red Clover, (northern)	"	8	10
French Sugar Beet,	"		1 50
Mangel Wurtzel,	"		1 50
WOOL, Merino, full blood, washed,	"	37	45
Merino, full blood, unwashed,	"	28	28
Merino, three fourths washed,	"	33	37
Merino, half & quarter washed	"	31	35
Native, washed,	"	22	28
Pulled, Lamb's, first sort,	"	40	43
Pulled, Lamb's, second sort,	"	27	30
Pulled, " spinning, first sort,	"	32	35

PROVISION MARKET.

CORRECTED EVERY WEEK BY MR. HAYWARD,

(Clerk of Faneuil-hall Market.)

BEEF, best pieces,	pound.	11	12
PORK, fresh, best pieces,	"	7	8
whole hogs,	"	5	6
VEAL,	"	5	6
MUTTON,	"	9	10
POULTRY,	"	8	10
BUTTER, keg and tub,	"	14	20
Lump, best,	"		20
EGGS,	dozen.	20	22
MEAL, Rye, retail,	bushel.		70
Indian, retail,	"		70
POTATOS,	"		50
CIDER, [according to quality,]	barrel.	2 00	3 00

MISCELLANIES.

We are glad that private balls for children are becoming more common. These meetings refine their thoughts and manners; exercise them most advantageously in a salutary accomplishment, and afford them the highest innocent delight. The consideration last mentioned ought ever to have weight;—enjoyment should be studiously provided for the season of life in which it has its keenest zest. The true halcyon days are those of well treated children.

"Gay hope is theirs by fancy fed,
Less pleasing when possest;
The tear forgot as soon as shed,
The sunshine of the breast:
Theirs buxom health of rosy hue,
Wild wit, invention ever new,
And lively cheer of vigor born;
The thoughtless day, the easy night,
The spirits pure, the slumbers light,
That fly th' approach of morn." *Nat. Gaz.*

Hints to the Ladies.—It has always been remarked, that the generality of females have many admirers, at the same time, few or no lovers; and they wonder at it—but the reason is obvious—if they thought, but thinking has become quite unfashionable. "Ah!" said a venerable maiden, lamenting the degeneracy of the age, "courting is nothing to what it was when I was young. The flirts now a-days, make the fellows so saucy, that there is hardly to be found a respectable lover." The observation was just. The ladies of the last age were more respected, because they were more reserved. For want of a proper reserve, they are treated with indifference, which is nearly allied to contempt. They make themselves too cheap to keep up their consequence, without which they can never be respectable. To speak philosophically, a lady must repel before she can attract.—All this advice may sound oddly to a female ear; but she who laughs at it, pays no great compliment to her understanding.—Ovid, who knew human nature tolerably well, discovered not a little penetration when he made Daphne fly so fast from her laurelled lover; for his passion was increased by the pursuit. *Our Daphnes* are quite another sort of people. Instead of flying from, they run into the arms of their Apollos, and are afterwards surprised that they grow cool to their charms.—Lovers are like sportsmen, to whom the possession of the game is nothing to the pleasure of the chase. If ladies would study less to please, they would give more pleasure. This is a paradox which those for whom I throw out these reflections cannot comprehend, and until they can, they will never make their fortune by their faces.—The roses of youth are not long in bloom, and when time has torn them away, there is an end to love at first sight; and on that they may seem by their manner of setting themselves off chiefly to depend. To be stared at a few seasons, and neglected, and in a few more, sink into oblivion, is the lot of a thousand showy girls, who have only external appearances to recommend them. Without prudence and discretion, even the most substantial ornaments, though they excite admiration, will never procure esteem. Prudence is superior to pearls; and there is no kind of comparison between diamonds and discretion. Fools may be caught by the shell; but the man worth having will make the gem the object of deliberation.—*Norfolk Herald.*

Drunkenness and Education.—In the Noctes Amrosianæ of Blackwood for the present month, is the following dissertation on drunkenness:—*North.* Drunkenness is the cause of nine-tenths of the grief and guilt that aggravate the inevitable distress of the poor. Dry up that horrid thirst, and the hearts of the wretched would sing aloud for joy. In their sober sense, it seldom happens that men, in a Christian country, are such savages. But all cursed passions latent in the heart, and seemingly, at least, dead or non-existent, while that heart beat heartily in sober industry, leap up fierce and full grown in the power of drunkenness, making the man at once a maniac, or rather at once converting him into a fiend.—*Shepherd.* There's nae cure for that but edication—edication o' the people—clear the head and you strengthen the heart—gie thoughts, and feeling follow. I agree wi' Socrates in thinking a' vice ignorance, and a' virtue knowledge, takin' a' the four words in the highest sense o' what they are capable.

The wife of a man who could ill afford it, having purchased a *fashionable* hat, said to her husband, "My dear, do you think my bonnet is of more than a *medium size?*" "No indeed," replied the husband, "I should say it is nearer the size called *fools-cap.*"

Mr Judd—I have noticed that the enterprising farmers in the north part of Hatfield, are about reclaiming a large swamp, of from 1000 to 2000 acres, and have actually succeeded in draining it by a canal from Connecticut river to the swamp. If they are not aware of the danger to themselves and the vicinity, from exposing such an extent of vegetable compound, it may be well to suggest to them, if they would escape the fatal diseases of malaria,* that the brushwood should be cut this winter while the frost is in the ground, and so arranged that it may be fired in the spring, and the entire surface burned over. J. H. F.

* See remarks on Malaria in our last paper.—Dr M'Culloch says the drainage of swamps and marshes is at first, and till they be put into cultivation, a source of disease undoubted. Such lands are productive of disease before they are drained, and they require drainage and cultivation as much for the purpose of preventing disease, as to increase the value of the produce.—*Hamp. Gazette.*

"*Bliss in Action.*"—The all wise Disposer of all things has decreed that man shall find a positive pleasure in the *due* exercise of his powers and faculties corporeal and intellectual. But excessive exertions take away all wish for even salutary exercise, and he who carries labor to excess, will at length find moderate labor irksome, if not painful.

Exercise gives strength to every fibre, and energy to all the vital powers. But exercise, like most good practices and habits may be carried to excess. Extreme toil not only shortens life but brings less to pass than steady, but moderate labor. It is not, therefore, often advisable for farmers to undertake to perform what are called "great days' works;" for one day of over exertion may cause weeks of debility, if not months of sickness.

Gardiner Lyceum.

The Winter Term, at this Institution, will commence on the first Wednesday of January next. The studies of the term are as follows:—

Regular Classes.

Third Class—Arithmetic, Algebra, Geometry, Book-keeping.

Second Class—Chemistry, Agricultural Chemistry, Calculus, Mensuration, Heights and Distances, Surveying.

First Class—Magnetism, Constitutional Law, Optics, Astronomy.

Winter Classes.

In Civil Architecture—Linear, Isometrical and Perspective Drawing, Carpentry, &c.

In Agriculture—Chemistry, Agricultural Chemistry, Elementary Principles of Natural History.

Navigation, and the French and Spanish Languages are also taught to those who wish.

Students in the winter classes will also be allowed to attend to any of the above studies with the regular classes, if they are prepared therefor.

Lectures.

Lectures will be delivered upon Chemistry, Agricultural Chemistry, and a short course upon the Anatomy and Diseases of Domestic Animals.

A large and commodious shop has been fitted up for the Mechanical Department, which will be under the superintendence of Mr Philip C. Holmes, an industrious and skilful mechanic. It has the convenience of water-power, for turning Lathes, Circular Saws, and other machinery. In this shop students will be allowed to work, and an adequate compensation will be paid to them for such work as they may perform. If ingenious and industrious they may be able to pay their expenses.

Dec. 31, 1828. 1

Orchard Grass Seed.

Just received at the New England Farmer Seed Store, No. 52 North Market Street, Boston,—a consignment of prime Orchard Grass Seed, raised by Mr Lloyd Jones, of Pennsylvania, who is well known as the most extensive and successful cultivator of this valuable grass in this country, as the following letter shows:

"Mr Russell,—In regard to the character of Mr Jones' seed, I have pleasure in saying, that it is the best in this market, and always commands an extra price. Col Powel always purchases of him, not only for himself but for his southern friends; and the Pennsylvania Agricultural Society, at their last exhibition, awarded him the premiums for both Orchard Grass and Clover Seed.

Yours, &c, JOHN P. MILNOR,
Recording Secretary Penn. Agri. Society.

Gentlemen who wish to secure a supply of this seed, will do well to secure it soon.

Also, a most extensive supply of Garden, Field, and Flower Seeds, raised expressly for us, or procured from the most unquestionable sources.

Canary Birds.

For Sale, a few copies of the New and Complete Canary Bird Fancier, containing a variety of useful information, by which the admirers of those beautiful Birds may be instructed in their management while breeding, and their treatment when diseased; with useful Hints to the breeders of Mules. From the latest London Edition.—Price 25 cts. Just received at the

Agricultural Warehouse.

4t No. 52 North Market Street, Boston.

Valuable Real Estate, &c, For Sale.

The Subscriber offers for Sale, the following Real Estates in Durham, N. H. viz:

About 50 acres of land, under good cultivation, with tolerable buildings thereon;—Soil of excellent quality, and capable of a high degree of improvement. Also, a Farm on the New Hampshire Turnpike road, containing about 80 acres, with buildings nearly new.

Also, a Farm of about 110 acres, with new buildings, lying within two miles of the New Market Factories.

Also, a small Farm lying in the Great Bay containing 30 or 40 acres, a very productive and excellent tract of land, in the neighborhood of the above named Factories.

Also three Houses in the Village of Durham—one of them possessing excellent accommodations for a Tavern.

Also, a Farm in Lee, containing about 80 acres.

Also, a Wood Lot in Barrington, containing 105 acres, well wooded.

He also offers for sale, a Stud Horse of approved blood, and several Mares and Colts of different ages.—All kinds of Farming Utensils, and Stock of all sorts.

The above described Lands are within a short distance of the large Factory Establishments at Dover and New Market.

Durham, Dec. 26, 1828. JOHN FROST.

Published every Friday, at $3 per annum, payable at the end of the year—but those who pay within sixty days from the time of subscribing, are entitled to a deduction of fifty cents.

Printed for J. B. Russell, by I. R. Butts & Co.—by whom all descriptions of Printing can be executed to meet the wishes of customers. Orders for printing received by J. B. Russell, at the Agricultural Warehouse, No. 52 North Market Street.